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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,346	06/07/2001	Tadashi Ichida	57139-5052	9056

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EXAMINER

SMITH, JULIE KNECHT

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,346

Applicant(s)

ICHIDA ET AL.

Examiner

Julie K Smith

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1 and 11-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species I, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Irwin (4,497,503). Irwin discloses a method of shifting gears in a hydraulic shift gear mechanism having a piston (50) and a master cylinder (52) comprising the steps of providing a shift control lever (30) spaced apart from a handlebar, wherein the lever is biased in a neutral position and the rotation of the rotating member in the first direction towards the handlebar corresponds to a movement of the piston in a push direction and the rotation in the second direction away from the handlebar corresponds to a movement of the piston in a return direction. Irwin further discloses the method of adjusting a slave piston (90) comprising the steps of providing a slave cylinder assembly (90), a master cylinder assembly (50,52) operatively connected to the rotating member of the positioning mechanism, and an adjuster piston (72) threadingly engaged with the master cylinder

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assembly and adjusted by rotating the adjuster piston to vary the depth in which the secondary piston extends into the master cylinder (see fig. 3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (5,832,782) in view of Irwin (4,497,503). Kawakami discloses a shift control device attachable to the handlebar of a bicycle, the shift control device comprising a bracket (3) attachable to the handlebar, a pivot shaft (see figs. 20a-d) spaced apart from the handlebar and fixedly secured to the bracket, a rotating member (90) rotatable in a first direction and a second direction about the pivot shaft, a control lever (95) operatively connected with the rotating member and biased in a neutral position, a push mechanism comprising a first latch segment and a push pawl biased toward the first latch segment and configured to cooperate with the first latch segment to rotate the rotating member in a first direction, a return mechanism comprising a second latch segment and a return pawl, the return pawl having a first claw and a second claw which alternately engage the second latch segment when the rotating member is rotating in the second direction (see figs. 20a-d). Kawakami lacks the hydraulic rack and pinion arrangement as claimed by the applicant.

However, Irwin teaches a pinion gear (44) rotatable about a pivot shaft and operatively connected to a rotating member wherein the pinion gear rotates with the rotating member, and a

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rack gear (46) engaged with the pinion gear and operatively connected to a piston (50) of the master cylinder, wherein the rotation of the rotating member in the first direction corresponds to a movement of the piston in a push direction and the rotation in the second direction corresponds to a movement of the piston in a return direction. Irwin further teaches a slave cylinder assembly (90), a master cylinder assembly (50,52) operatively connected to the rotating member of the positioning mechanism, the master cylinder assembly having a primary piston (50) that is movable in a push direction when the rotating member rotates in a first direction and is movable in a return direction when the rotating member rotates in a second direction, a conduit (58) conveying a fluid between the master cylinder assembly and the slave cylinder assembly, the conduit having a volume, and an adjuster piston (72) threadingly engaged with the master cylinder assembly and operable to adjust the volume of the conduit.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Kawakami with the teachings of Irwin to have an adjustable hydraulic rack and pinion device for shifting the bicycle so as to provide a smoother shifting process by reducing friction and reducing "lost motion" in the system while allowing the amount of fluid entering the cylinder to be adjusted and controlled, providing for a more efficient system.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,862,709 to Kageyama

4,633,726 to Chang

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4,560,049 to Uchibaba et al.

6,095,309 to Mione

3,991,845 to LaPointe

4,896,753 to Sule

5,443,134 to Gajek et al.

4,635,442 to Bass

5,178,033 to Kund

5,941,125 to Watarai et al.

5,967,937 to Matsuo

6,276,231 to Yamane

5,655,982 to Fyfe

JP 09039868A to Nisshin

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie K Smith whose telephone number is 703-305-3948. The examiner can normally be reached on Monday-Friday, 8-5:30, (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703-308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

JKS

jks

March 24, 2003


CHONG H. KIM
PRIMARY EXAMINER